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ABSTRACT OF THE DISCLOSURE

An optical disk recording apparatus operates on an optical disk having circular tracks which are provisionally written with an index signal used for securing a constant linear velocity of the optical disk from an innermost circular track to an outermost circular track, and records data along the circular tracks at different linear densities on different annular zones of the optical disk. In the apparatus, a disk drive section rotates the optical disk while synchronizing the index signal successively read from the rotated optical disk with a predetermined reference clock signal to thereby maintain the constant linear velocity of the circular tracks. A clock generating section multiples or divides the reference clock signal by different rates to generate different writing clock signals in correspondence to the different annular zones of the optical disk. A data recording section operates in synchronization to the different writing clock signals for recording data along the circular tracks at the different linear densities on the different annular zones.